SCIENCE & GOVERNMENT REPORT

16th Year of Publication

The Independent Bulletin of Science Policy

Volume XVI, Number 16 | P.O. Box 6226A, Washington, D.C. 20015 | October 15, 1986

NAS Stiffed for $100,000

DOD Balks at Aiding Academy's Export-Control Study

The Department of Defense has withheld its cooperation and failed to pay $100,000 that DOD promised to help finance a National Academy of Sciences study of the effects of security regulations on US high-technology exports. The turnabout was inspired by Pentagon hardliners who feared the study would contradict their claims that the Soviets are illictly and openly obtaining a gusher of strategically valuable American technology.

The Academy study is on a delayed schedule that calls for publication of a final report in February, but it is expected to acknowledge a number of gaps in its data and conclusions because of the Pentagon's refusal to provide information. Other government agencies, including the CIA, fulfilled their agreements to cooperate with the study.

Planned at an overall cost of $855,000 in government and private funds, the Academy study arose from concerns that ham-handed export controls are blocking sales of US products of non-strategic value and interfering with US competitiveness. Unlike most Academy studies, this one was initiated from within—rather than requested by a government agency.

In Pork-Barrel Retreat: AAU Organizes a Study—Page 6

To protect its political flanks, the Academy assigned the study to a 21-member panel composed mainly of blue-chip technocrats, including such national-security brahmans as Admiral Bobby Inman, former CIA Deputy Director; General Lew Allen, former Air Force Chief of Staff, who chairs the study, and Melvin Laird, former Secretary of Defense.

DOD initially agreed to give the study $200,000 and its full cooperation, and delivered an agreed-on first installment of $100,000 when the study got underway last year. But following a classified briefing at the Pentagon, the NAS study was caught in an inhouse crossfire of rival factions at DOD. On one side was DOD's Policy wing, homebase of the Administration's preeminent hardliner, Assistant Secretary Richard N. Perle, apostle of the crank notion that Soviet military power is built of stolen American technology. On the other side was DOD Research and Engineering, which has generally shown an aversion to the secrecy mania of the hardliners and their daft views of the origins of Soviet military technology.

The agreement to support the study, and make the initial payment, was made by Richard D. DeLauer, DOD Under Secretary for Research and Engineering. It may be assumed that he felt the findings would provide him with ammunition for his long-running battles with Perle and company. But by the time the second

(Continued on page 3)

In Brief

Defense-related programs were budgeted by the White House for 75 percent of all federal R&D funds in the fiscal year that began October 1, NSF reports on the basis of analyses of defense R&D in and out of the Pentagon. Ups and downs on Capitol Hill may alter that figure a bit, but the overall trend remains clear: From the mid-1960s until Reagan took office, federal R&D spending was about evenly divided between military and civilian agencies ($17.6 billion apiece in 1981). Final R&D figures for last year show defense at $36 billion, civilian R&D still around $17 billion. (NSF Report 86-312, four pages, no charge, from NSF Division of Science Resources Studies, 1800 G St. NW, Washington, DC 20550; tel. 202/634-4622.)

There's a newcomer in the crowded but ever-expanding field of biomedical-research lobbies on Capitol Hill—the Alliance for Aging Research (601 Indiana Ave. NW, Suite 500, Washington, DC 20004; tel. 202/393-2472). Chaired by David R. Carpenter, Chairman of Transamerica Life Companies, the organization lists 14 members of Congress as founding members. First goal: to give Congress "a scientific assessment of progress in aging research."

William H. Raub, NIH Deputy Director for Extramural Research and Training since 1983, has been appointed to the Number 2 position in NIH, Deputy Director. Raub succeeds Thomas E. Malone, who retired in August after nine years in the position.

The number of medical graduates is declining, but slowly, according to the Association of American Medical Colleges. The class of 1986 totaled 16,117, 201 below the class of 1985. The biggest ever was the class of 1984, with 16,343 graduates. The AAMC forecasts a drop to 15,500 graduates within four years.

Export Study Reflects NAS's Expanding Ambitions

Titled "A Study of the Impact of National Security Controls on International Technology Transfer," the project underway at the National Academy of Sciences reflects the growing alliance between big-league academic science, high-tech industry, and the erect-walking segments of the national-security establishment.

Drawing prestige from its role as the honorary society of the presumed cream of American science, the 123-year-old Academy has traditionally represented basic science in Washington, while its captive subordinate, the National Academy of Engineering, stumbled about, earnestly searching to appear useful and busy. In its federal advisory chores, which are the bread and butter of its existence, the Academy complex has mainly relied on the services of scientists and engineers who are professionally recognized as specialists in their fields, but who are usually unknown to the general public and little involved in policy issues.

There's been a slow but steady change under the administration of Frank Press, Science Adviser in the Carter White House and now in his 5th year as President of the Academy. During that time, the NAS has extended its scope beyond the care and feeding of science to issues of industrial competitiveness, government-imposed secrecy on research and technology, and the general health of the nation's high-tech resources. Press has successfully worked to raise unrestricted as well as special project funds to finance activities in addition to the NAS's traditionally passive role of responding to requests from government agencies. The NAE, which has been building its own treasury by leaning on industry, has joined in.

In their policy studies, the two organizations have been going above the bench-level to mobilize specialists and organizational chiefs who might be expected to command wide public and political credibility. The cast of the export-controls study is an example—with the added twist of political respectability, as well as professional standing, written into the recruitment criteria. Given the skepticism and ire that this Academy venture would inevitably arouse in hardline circles, the NAS went looking for experts above suspicion.

For Chairman, they picked a retired Air Force Chief of Staff, General Lew Allen, who is now Director of the Jet Propulsion Laboratory. They also appointed one of the early alarmists of Soviet high-tech piracy, retired Admiral Bobby Inman, former Director of the National Security Agency and former Deputy Director of the CIA. Inman is founding president of Microelectronics and Computer Technology Corporation, an industrial consortium founded to compete with Japan's pooled efforts in electronics.

There's Melvin Laird, former Republican Congressman and Secretary of Defense, currently a senior executive with *Reader's Digest,* and John Foster Jr., former chief of research at the Defense Department, now with TRW Inc. as Vice President for Science and Technology. The other members:

Daniel Berg, President, Rensselaer Polytechnic Institute

Thomas Christiansen, Manager of International Trade, Hewlett-Packard

W. Dale Compton, former Vice President for Research, Ford Motor Co.

Richard Cooper, Professor of Economics, Harvard; Under Secretary of State for Economic Affairs, 1977-80

John Deutch, Provost, MIT

Herbert Dwight Jr., CEO, Spectra-Physics, Inc.

Alexander Flax, President emeritus, Institute for Defense Analyses.

Frederick Garry, Vice President, Corporate Engineering and Manufacturing, General Electric

Mary Good, President and Director of Research, UOP, Inc.

Ruth Greenstein, Vice President, Genex

Joshua Lederberg, President, Rockefeller University

Franklin Lindsay, Chairman, Vectron, Inc.

John McLucas, former President, Comsat World Systems Division

Richard Meserve, Washington, DC, attorney

G. William Miller, Washington, DC, investment banker

Leif Olsen, former Chairman for Economic Policy, Citibank

Rudolph Oswald, Director, Department of Economic Research, AFL-CIO

The breadth of interest in the study is indicated by the range of organizations that provided financial contributions. In addition to $200,000 from the Academy's treasury and the $100,000 paid in by the DoD support was provided by the following:

National Science Foundation	$100,000
NASA	50,000
State Department	20,000
Commerce Department	100,000
Energy Department	50,000
US-Japan Friendship Commission	5,000
German Marshall Fund	15,000
National Society of Professional Engineers	7,500
American Institute of Aeronautics and Astronautics	3,000
Semiconductor Industry Association	2,000
Institute of Electrical and Electronic Engineers	25,000
Armed Forces Communications and Electronics Association	25,000
American Geophysical Union	10,000
Optical Society of America	3,000
Computer and Business Equipment Manufacturers Association	10,000
American Vacuum Society	2,000
American Physical Society	10,000
AAAS	15,000

. . . New DOD Agency Tracking High-Tech Exports

(Continued from page 1)

$100,000 was due, DeLauer had left the Pentagon, and contractual authority for funds for the NAS study had been taken over by Perle's office. Several requests by the NAS for the second $100,000 have gone unanswered. NAS has in the meantime made up the financial gap from its own general funds. These have grown in recent years, but the Academy still mainly exists on a hand-to-mouth diet of federal contracts, and the nonpayment of the promised $100,000 grates on its parsimonious character.

Defense officials and officers of the Academy have refused to discuss the Pentagon's deadbeat antics with SGR. The NAS brass is also withholding comment on the stonewalling treatment they've received from caveman central at the Pentagon—the office of Perle, Assistant Secretary for International Security Policy, and his loyal sidekick, Stephen D. Bryen, a one-time political science teacher who serves as the Pentagon's mastermind for high-tech export policy.

Bryen, who was assigned to serve as liaison to the Academy study when it got underway in July 1985, heads the Pentagon's Defense Technology Security Administration (DTSA), a new and little-known agency deep in the DOD bureaucracy. The heart of DTSA is a crackpot scheme for computerized tracking of exports from the US that might be of value to the Soviets. Viewing himself as the final barrier between America's high-tech riches and crafty Soviet agents, Bryen early on privately dismissed the Academy study as a naive, thumbsucking operation that did not warrant.

At the Pentagon, the NAS export study was derisively dubbed "Corson II," a reference to a 1982 Academy study, chaired by Dale Corson, former President of Cornell University. Corson's study concluded that the Soviets were deriving little or no scientific benefit from the traditional openness of university-based fundamental research in the US, and that any attempts to curtain off academic science would be more harmful to the US than to the Soviets. The Corson findings directly contradicted the Perle-Bryen view of the scientific world, and enhanced that pair's already ample contempt for policy meddling by the high temple of American science.

But Perle effused congeniality after he learned that while he wasn't paying attention, DeLauer's wing of the Pentagon had signed on to cooperate with and help finance the NAS export study. Perle's cooperation was sought by the Academy because, as Pentagon chief for International Security Policy, he controlled access to classified information needed by the Academy panelists. He came on smiling.

(Continued on page 4)

DOD Cool to Export Study Right from the Start

In 1984, when the National Academy of Sciences was raising funds for its study of export controls, it prepared a proposal that looked sensible and neutral from a scholarly perspective but that set off alarms among Pentagon hardliners, who long before had concluded that technology "leakage" was a major national-security problem. Within the Policy wing of DOD, the basic issue was seen as laxity of controls, and the NAS study was instantly regarded as a drive to pry open the gates with a whitewash study bearing the Academy's prestige. The following is from the NAS proposal to the National Science Foundation.

●

. . . the government has continued to gather evidence of and express concern about unwanted technology transfer. At the same time, the concerns of private industry have been heightened both by recent regulatory proposals from the Executive Branch and by certain language proposed for incorporation within the Export Administration Act currently under consideration by Congress. As a result, many in government, science, and high-technology industries now perceive a dilemma.

On the one hand, leaders of high-technology industry feel trapped between what they see as a cumbersome system of export controls, which adds substantially to the cost and time parameters involved in conducting overseas business, and an increasingly competitive international marketplace, where product innovations offer only short-lived "windows of opportunity" that may be neutralized by regulatory delays and cost increases.

On the other hand, government officials feel torn between the desire to promote US international trade and the need to safeguard militarily critical technical information, much of which has been developed at public expense . . . .

The goal will be to develop and present an objective assessment of the costs and benefits of national-security controls on high-technology industry that safeguard the legitimate military interests of the United States and the NATO alliance yet which permit efficient industrial R&D and technological innovations in the United States—as required for both national defense and for the attainment of economic goals—and development of a coherent and uniform control system among the allied CoCom [coordinating committee for export controls] states.

Presidential Science Office: Deep in Doldrums

Cheerfully homicidal, the fictional Dr. Strangelove is the most celebrated presidential science adviser of our time, a Rasputin from research who commanded the ear of a scientifically illiterate president. But in reality, the obscure though romanticized post of White House wizard has never ranked high in political decision making or in presidential influence.

Its current status, following the snail's-paced odyssey of William R. Graham to the position, is more doubtful than ever, given Graham's arrival late in a final presidential term and the injuries he suffered along the way. But at last he's there, as both presidential Science Adviser and Director of the Office of Science and Technology Policy (OSTP). The Senate Committee on Commerce, Science, and Transportation approved his nomination, 10-3, on September 24 (SGR Vol. XVI, No. 15); the full Senate confirmed him without a recorded vote on October 1, and, for legal purposes, he was nonceremonially sworn in at the White House Office of Administration the next day.

Graham then went to the OSTP offices, which he had prudently avoided during the unexplained two months that elapsed between the White House announcement that it would nominate him for the job and official delivery of the nomination to the Senate, plus another month while he was in the confirmation process. A ceremonial swearing in, with Vice President Bush administering the oath, is scheduled for October 16. Meanwhile, Graham is reported to be reviewing the work of OSTP and its various appendages.

The omens are not bright for what is, by Act of Congress and day-to-day practice, supposed to be science's preeminent linkage to government and politics. Following an incredible 10-month hiatus in the post of presidential Science Adviser, Graham comes aboard as a politically wounded refugee from the Challenger disaster. A 48-year-old physicist with long ties to the Republican Party and career involvement in defense research, Graham was thrust into the number two spot at NASA last November—over the protests of NASA's chief, James M. Beggs. But within two weeks, Graham became the acting head of the space agency when Beggs took leave to defend himself against charges of criminal fraud in his previous post as vice president of General Dynamics.

(Continued on page 5)

Export Study

(Continued from page 3)

In July 1985, in a dinner talk to the opening meeting of the 21-member Academy panel, Perle warmly praised the importance of its task, expressed confidence in the skills and objectivity of the panelists, and pledged full cooperation. The members emerged from an evening of catered rare beef and Bordeaux at the Academy generally agreeing that Perle, renowned as a Soviet hater and bureaucratic cutthroat, was actually a charming fellow.

Within a few days, however, a computer "bulletin board" message from Bryen to his assorted henchmen warned that the Academy study was bound by preconceived conclusions and did not merit cooperation. When information was sought from Bryen, he told the Academy that he was undecided about the degree of cooperation his office would provide. But, by simply ignoring requests for information—not even returning phone calls or answering written inquiries—Bryen's decision became clear.

Last spring, the Chairman of the Panel, retired General Allen, met with Perle's boss, Fred C. Ikle, Under Secretary of Defense Policy, and DeLauer's successor, Donald Hicks, to protest the Pentagon's lack of cooperation and refusal to pay its promised share of the costs. Nothing came of that meeting. However, the study, including trips to Western Europe and Asia, has received the cooperation promised by other US government agencies.

Publication of a report was originally scheduled for last June, but February is now the stated date, as a final draft nears completion. Still to come are reviews by agencies that provided classified information, including the Defense Department. The right of review, of course, provides rich opportunities for mischief. —DSG

ISSN 0048-9581

© Science & Government Report, Inc., 1986

Editor and Publisher
Daniel S. Greenberg

Associate Publisher
Wanda J. Reif

Contributing Correspondents
Francois Seguier (Paris); Ros Herman (London)

Independently published by *Science & Government Report, Inc.*, twice monthly, except once each in January, July, August, and September. Annual subscription: Institutions, $195.00 (two years, $340.00). Information about bulk and individual rates upon request. Editorial offices at 3736 Kanawha St. N.W., Washington, DC 20015. Tel. (202) 244-4135. Second-class postage at Washington, D.C. Please address all subscription correspondence to Box 6226A, Northwest Station, Washington, DC 20015. Reproduction without permission is prohibited. SGR is available on Xerox International Microfilms. Claims for missing back issues will be filled without charge if made within six weeks of publication date.

. . . The Long Hunt for Successor to Keyworth

(Continued from page 4)

Ten weeks later the Challenger exploded, and Graham was on the Congressional griddle to defend an agency whose career bureaucracy regarded him as an unseasoned interloper in space affairs. Asked by Senator Ernest Hollings (D-South Carolina) whether objections had been raised to the fatal launch, Graham—apparently in good faith and ignorance—emphatically said no. Whereupon, it was promptly disclosed that Morton Thiokol engineers had strongly recommended against the launch.

Meanwhile, entirely apart from the post-Challenger drama, the White House was encountering difficulty in filling the post of presidential Science Adviser, which had become vacant January 1, when George A. Keyworth II voluntarily stepped down. Nearly five years in the job, Keyworth said he had fulfilled his goal of increasing federal money for university-based science and boosting research to give US industry more competitive muscle. But money and staff are the measure of influence in Washington and aficionados of science-policy affairs noted that the presidential budgetmakers had earmarked Keyworth's office for a big cut—$600,000 from its already spartan budget of $2.2 million. Furthermore, with presidential crony and kingpin Ed Meese gone from the White House staff, Keyworth had lost his main connection to the Reagan inner circle.

Polite refusals to replace him were returned by several industrial research administrators who were offered the job. Their rationales, quite simply, were that the post of presidential Science Adviser obviously did not rank high in presidential regard. One of them says he told the White House recruiter that he would take the job if the President personally asked him to and assured him of entree to the Oval Office. He heard nothing more.

While the search for a Keyworth replacement stumbled on, the beleaguered Graham was still at NASA, vying to make the jump from Acting Administrator to a full-fledged appointment. The White House, however, decided that a prestigous figure was needed to rebuild the space agency—and persuaded former Administrator James Fletcher to return to the job. On June 3, with Fletcher on board at NASA, the White House announced that Graham would be nominated for the long-vacant presidential science job.

However, nearly two months elapsed before the nomination was actually sent to the Senate—an unexplained and rare interval in such matters. Graham says he can't account for the delay. Senate sources say the White House was waiting for Hollings to cool off. At his confirmation hearing, on September 11, Graham came across as well-informed, personable, and commited to the good health of American science. Hollings did not attend.

But when a vote was taken by the Committee, Hollings voted nay, as did Senators Albert Gore (D-Tenn.) and Ted Stevens (R-Alaska). The negative votes were unprecedented in the 25 years since the presidential advisory post has been subject to Senate confirmation. Hollings was still irate about Graham's Challenger testimony, while Gore said he felt Graham lacked the scientific stature necessary for the job. Stevens' opposition went unexplained.

It is not a flying start. —DSG

NSF Wins Plea to Remove 4 Posts from White House Orbit

In 1968, misguided Congressional friends of the National Science Foundation concluded that the agency would benefit from greater political visibility, especially at the White House. So, they rewrote NSF's legislative charter to require presidential nomination and Senate confirmation of four Assistant Directors. Up to that time, only the Director and Deputy Director were presidential appointees, and the Assistant Directors were appointed by the Director.

The expansion of presidentially filled slots didn't affect NSF's standing at the White House, which has never lavished any great attention on this relatively small and politically pale agency. But it did enmesh these minor appointments in the White House clearance process, which often moves slowly when there's no reason to hurry.

The result was that the assistant directorships often went unfilled for months—sometimes for over a year—while candidates were scrutinized for blemishes that might embarrass the President. In some cases, when clearance was issued, the candidate was no longer available, and the search process would resume from the beginning. At one point several years ago, three of NSF's four disciplinary directorates were led by acting chiefs while the recruiting and clearance system droned on.

At the strong urgings of recent NIH Directors, including the incumbent, Erich Bloch, Congress has now done a turnabout on the appointments issue. Under a provision in an authorization bill that the President signed in August, NSF's White House appointments are now back to where they were under the founding legislation of 1950: Only the Director and Deputy are Presidential appointees.

Academic Pork: Retreating AAU Organizes Study

On a long losing streak in its campaign to block the have-nots and, increasingly, the well-heeled of academe from taking the pork-barrel route on Capitol Hill, the Association of American Universities (AAU) has withdrawn from further combat to orchestrate a study of the issue. The decision comes after the raiders racked up a banner record in the current Congress. Since the AAU—representing mostly big research universities—was their main opponent, it may be assumed that the fight is over and the next step is to work out a new design for sharing the wealth.

As announced by the AAU on September 29, the study will be conducted by a "Working Committee on Principles, Policies, and Procedures in the Award of Federal Funds for University Research Facilities and Research Projects." Serving as Chairman will be Donald Langenberg, Chancellor of the University of Illinois, Chicago, and former Deputy Director of the National Science Foundation.

Congressional Staff Joins In

As might be expected, the Committee will include representatives of universities and the Washington-based lobbying organizations that have been deep in the fight for several years. In addition, three Congressional staff members have agreed to take part—which is somewhat unusual. They are: Henry A. Neil Jr., a veteran member of the House Appropriations Subcommittee on Labor, Health and Human Services, and Education; Riki Postar Sheehan, a member of the counterpart Subcommittee in the Senate, and Maurice Watson, Legislative Assistant to Senator John C. Danforth (R-Mo.), whose initially successful attempt to block a batch of "earmarked" projects was later overturned by heated politicking in both houses (SGR Vol. XVI, Nos. 11, 12).

The Committee was asked to report by December 1. The charge calls for it to "review the present dilemma and to suggest ways in which university and government leaders might be brought into agreement on how funding decisions on university science and engineering research facilities and projects can be based on informed judgments of intellectual quality while recognizing other legitimate interests."

The significant words here are "other legitimate interests." In the battles that have been inspired by political grabs for federal funds for R&D activities, universities that have fared well under strictly defined "merit review" have insisted that science would suffer if factors such as regional economic development and "fair shares" were taken into consideration. One of the strongest advocates for traditional purity in the decision-making process was Robert M. Rosenzweig, President of the AAU.

But after taking a beating this year in Congress and from some of his own member universities, Rosenzweig has come around to the view that it's purposeless to fight a hopeless battle. Some of his strongest allies in the university community have been warning that Congressmen who are needed on big issues of student loans and other aid to higher education have been offended by the AAU's resistance to a bit of special help for the campus back home.

Upswing in Raids

The AAU's announcement of the study notes that "pressures on university leaders and members of Congress that lead to earmarking show no sign of abating. The present circumstance is one in which all the major organized voices of higher education and research oppose the practice, yet it continues and even appears to be growing. There is increasing concern in both government and the universities that we may face a future in which informed judgments about intellectual and scientific quality are no longer central to federal decision making about funding for science and engineering."

Joining in sponsorship of the study are the American Council on Education, the National Association of State Universities and Land-Grant Colleges, and the Council of Graduate Schools in the United States.

In addition to Chairman Langenberg and the Congressional staffers, members of the Working Group are:

Donald K. Hess, Vice President, University of Rochester

Leslie W. Koepplin, Director of Federal Relations, Rutgers

Jules B. LaPidus, President, Council of Graduate Schools in the United States

David Morse, Director of Federal Relations, University of Pennsylvania

Cornelius J. Pings, Provost, USC

Arthur M. Sussman, Vice President, University of Chicago

STAFF MEMBERS FOR THE WORKING GROUP ARE:

John C. Crowley, AAU Director of Federal Relations for Science Research

Jerold Roschwalb, Director of Governmental Relations—Higher Education, National Association of State Universities and Land-Grant Colleges

Carol R. Scheman, AAU Director of Federal Relations for Health and Biomedical Research

Becky H. Timmons, Associate Director, Governmental Relations, American Council on Education.

In Print: Languages, Industry, Ag, NSF, Etc.

The following publications concern subjects of interest to the science-policy community. Copies are available as indicated in the boldface headings (not from SGR):

•

From the Association of American Universities, Suite 730, One DuPont Circle, Washington, DC 20036; tel. 202/466-5030.

A Legislative Proposal to Create a National Foundation for Foreign Languages and International Studies (44 pages, no charge), draft of proposed legislation, and supporting materials, for rebuilding American academic capabilities in these neglected areas. The advisory committee for the supporting studies was chaired by Kenneth Prewitt, of Rockefeller University.

•

From the National Academy Press, 2101 Constitution Ave. NW, Washington, DC 20418; tel. 202/334-3313

Toward a New Era in US Manufacturing (174 pages, $12.50), part of a series of reports on industrial competitiveness by the Manufacturing Studies Board of the National Academy of Engineering, chaired by Robert Kurtz, retired GE Senior Vice President; ranges over the technological turbulence affecting manufacturing industries and says that "new management techniques, organizational structures, and operational procedures" will be needed to meet foreign competition. For a study focused on industrial competitiveness, it had odd backing. The project was financed by the Army, Navy, and Air Force, and administered by the Office of Naval Research, under the direction of the Under Secretary of Defense for Research and Engineering. But—that's where the money is these days.

•

From Superintendent of Documents, USGPO, Washington, DC 20402; tel. 202/783-3238—Reports of the Congressional Office of Technology Assessment

A Review of US Competitiveness in Agricultural Trade (GPO Stock No. 052-003-01054-2, 98 pages, $5.50), OTA "technical memorandum" prepared at the request of Senator James Abdnor (R-SD), Vice Chairman of the Joint Economic Committee, examines the factors that account for US loss of world agricultural markets in which it once was the most economical producer and also looks at areas in which US producers retain their traditional cost advantage; contains lots of crop statistics and international comparisons.

Technologies for Detecting Heritable Mutations in Human Beings (GPO Stock No. 052-003-01037-2, 144 pages, $8.00), cautions that legislation designed to provide protection against mutagenic exposure is undermined by inadequate scientific understanding of risks of occupational and environmental exposure.

Ocean Incineration—Its Role in Managing Hazardous Waste (GPO Stock No. 052-003-01046-1, 223 pages, $11), a major study, ordered by several House and Senate committees, concerning a method of waste disposal that's been temporarily suspended following public protests. A down-the-middle OTA *tour de force*, with heavy emphasis on the abundance of uncertainties. Upon publication, it was hailed by competing partisans as supporting their case.

•

National Science Foundation, 1800 G St. NW, Washington, DC 20550; tel. 202/357-7861

Publications of the National Science Foundation (16 pages, no charge), lists scores of NSF reports and literature on its programs and tells how to order copies.

•

National Academy of Sciences; Government-University-Industry Research Roundtable, JH 308, 2101 Constitution Ave. NW, Washington, DC 20418; tel. 202/334-3486

New Alliances and Partnerships in American Science and Engineering (132 pages, no charge), papers and commentary from a December 1985 meeting at which academic and industrial representatives told how they're trying to do more business with each.

Statement of ownership, management, and circulation of *Science & Government Report*, published 20 times per year, at 3736 Kanawha St. NW, Washington, DC 20015, by Science & Government Report, Inc., sole stockholder, publisher and editor, Daniel S. Greenberg (same address). Extent and nature of circulation: Average number of copies printed each issue during preceding 12 months/actual number of copies of a single issue published nearest to filing date (October 1, 1986), 1300/1300; total number of copies printed, 1300/1300; paid circulation through dealers, carriers, street vendors, and counter sales, 0/0; mail subscriptions, 1015/1062; free distribution by mail, carrier, or other means, 35/35; total distribution, 1050/1097; copies not distributed, 250/203; total, 1300/1300.

TO ORDER OR RENEW

Science & Government Report
Northwest Station, Box 6226A
Washington, D.C. 20015

☐ Renew my subscription; ☐ Check enclosed
☐ Enter my subscription; ☐ Please bill

Institutional subscribers: one year, $195.00 ☐; two years, $340.00 ☐

(Overseas airmail, $30.00 per year additional.)

Name _____

Address _____

_____ Zip _____

White House Aides Get Pitch for Basic Science

A longshot campaign for a major increase in federal support of academic science got an unannounced hearing at the White House September 24 when the Reagan inner circle sat down with three big-league industrial executives who are championing the science cause around Washington.

who is chairman of Hewlett-Packard; John Young, President of that firm, and Roland Schmitt, Chief Scientist and Senior Vice President of General Electric, who also serves as Chairman of the National Science Board, NSF's policymaking body.

Meeting with them were Donald Regan, the White House Chief of Staff; James C. Miller, Director of the Office of Management and Budget, and John Poindexter, the President's National Security Adviser. Several other White House staff members also attended.

The meeting lasted for about 40 minutes, and the discussion was pitched toward the early planning now underway for the 1988 fiscal year. The case for more money for science was linked to industrial competitiveness—an increasingly hot bipartisan favorite in Washington.

Two years ago, Packard co-chaired a White House Science Office panel that found university science in disrepair and urged more federal money. Young chaired the President's Commission on Industrial Competitiveness, which also recommended more assistance for academic science. Schmitt, in tandem with NSF Director Erich Bloch, has been seeking appropriation of an extra billion or two for basic science.

The White House meeting reportedly was cordial and the listeners were attentive though non-commital. What's interesting to note is that industry is carrying the political load for academic science, which has few connections to high places in the Reagan Administration. The message of these champions of science is devoid of any sentiment about the place of the university in American culture or the social role of science. The pitch is plain and direct: science merits additional federal bucks because it's economically useful.

Despite the Howls, SDI Doing Growing Business on Campus

The Strategic Defense Initiative has evoked severe criticism and vows of abstinence from thousands of academic researchers, but figures made available to SGR show that Star Wars is dishing out a fair amount of money to universities—and not just to backwater institutions, as some have snickered.

At this point, the only complete tabulation is for SDI's startup year, fiscal 1985 (ending September 30, 1985), which adds up to $14 million contracted to universities by SDI's principal link to academe, the Innovative Science and Technology Office. The spending pace picked up sharply after that.

With some contracts still in the mill, the data for fiscal 1986 are incomplete, but the total sum for work in universities in fiscal 1986 is expected to be $35 million to $45 million. And in the new fiscal year, 1987, SDI expects university contracts to rise to around $55 million.

SDI says the rankings for 1986 and 1987 will be approximately the same as in 1985, for which the 15 top recipients were:

Stanford (of which about $2.5 million was for medically related laser research)	$3,500,000
UC Santa Barbara	800,000
UCLA	280,000
UC Irvine	225,000
UC Berkeley	195,000
UC San Diego	180,000
U of Texas System	800,000
Johns Hopkins (Applied Physics Lab)	700,000
Auburn University	700,000
SUNY (Buffalo and Stony Brook)	630,000
Baylor (medical laser)	600,000
NY Polytechnic	540,000
University of Maryland	535,000
MIT	522,000

Science & Government Report
Northwest Station
Box 6226A
Washington, D.C. 20015

Second class postage paid at Washington, D.C.

UNIVERSITY MICROFILMS INTERNATIONAL
300 N. ZEEB RD.
ANN ARBOR, MI 48106